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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/512,144

10/22/2004

Morihisa Momona

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VIENNA, VA 22182-3817

EXAMINER

PHAM, BRENDA H

ART UNIT

PAPER NUMBER

2416

MAIL DATE

DELIVERY MODE

12/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/512,144

Applicant(s)

MOMONA, MORIHISA

Examiner

BRENDA PHAM

Art Unit

2416

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/22/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- _____ Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- _____ Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-13 are pending in the application.

Response to Amendment

2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Response to Arguments

3. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

4. Claim 12 is objected to because of the following informalities: claim 12 is depending on claim 5, but claim 12 is duplicated of claim 5. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 5 and 12 recite the limitation "said mobility management nodes" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-2, 4-6, 8-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Guo et al (US 2004/0168051 A1).

Regarding claims 1, 2 and 6, Guo discloses a mobile communication method in a mobile communication network system (see FIG. 2) comprising:

a mobile communication network (**Access Network 201**);

a plurality of external networks (**Site A, Site B and Site C**);

a plurality of mobile terminals (**MN1...MNm**);

a plurality of gateways (**IPSG1...IPSG5**) for connecting said external networks (**Site A, Site B and Site C**) and said mobile communication network (**Access Network 201**); and

a plurality of radio access points (**MAP1...MAP5**) for connecting said mobile terminals (**MN1...MNm**) to said mobile communication network (**Access Network 201**),

said mobile communication method comprising:

setting, by a mobile terminal, a session for any of said external networks with said radio access point;

transferring, by a radio access point, packets that have been received from any said session to a virtual network that has been prepared for each of said external networks that corresponds to the session; and

transferring, by said radio access point, packets that have been received from said virtual network that corresponds to any external network to the session that has been set for a use of said external network by said mobile terminal that is a destination of the packets (**"A method and apparatus for optimally provisioning connectivity for network-based mobile virtual private network (VPN) services. The method and apparatus includes provisioning each of a plurality of IP service gateways (IPSGs) to support virtual private network (VPN) tunneling between customer premise equipment of s subset of VPN customers and at least one mobile access point (MAP). Each MAP is geographically remote from the plurality of IPSGs, and supports VPN tunneling to mobile nodes of the subset of VPN customers."** Abstract). Guo further teaches "To set up a data session, a mobile end user utilizing a mobile node (MN) 230 must first connect to a MAP 208, which then routes the session towards the destination CPE through an appropriately provisioned IPSG. Thus, a network-based mobile VPN service mobile data session originates from an MN 230 to a MAP 208, and is then routed through a particular IPSG 206 to the enterprise CPE 222."^[0030]).

Regarding claims 4 and 8, Guo et al discloses wherein said mobile communication network (Access Network 201) further comprises a mobility

management node that comprises a plurality of virtual mobility management nodes that each comprises:

means that is prepared for each of said external networks for transmitting and receiving packets only with a virtual network that has been prepared for use by a corresponding external network;

means for holding positional information that has been reported from said mobile terminals; and

means for, when packet that are addressed to said mobile terminals are received, transferring these packets to positions that have been reported from said mobile terminal,

wherein each of said mobile terminals further comprises:

means for reporting positional information to said virtual mobility management node that corresponds to said external network to which the mobile terminal is to be connected. **("the IPSPG and MAP are collocated in the network, where an IPSPG/MAP performs radio to packet network gateway functions to terminate the MN's connection, as well as conducting other IPSPG specific function." [0007]).** Guo further teaches **"In particular, the MNs 230 are identified using, for example, conventional Network Access Identifiers (NAI) and/or Access Point Names (APN). A MAP extracts the NAI/APN of the MN 230 during connection setup time with the MN. The MAP can then identify the destination CPE 222 directly from the NAI/APN, if there is only one CPE 222. If there is more than one CPE 222, the**

MAP can determine the MN's 230 preferred CPE222 from an Authentication, Authorization and Accounting (AAA) server of the service provider 201. [0034]].

Regarding claims 5, 11, 12 and 13, Guo further teaches:

transmitting and receiving packet for control and management that are transmitted and received between said radio access points, said mobility management nodes, and said gateways that are arranged within said mobile communication network by way of a control/management virtual network that is provided within said mobile communication network; and

refusing packets for control and management that have been received from a source other than said control/management virtual network (“**when this MN 130.sub.1 roams into the region served by IPSPG.sub.2 106.sub.2, the data session is reestablished with IPSPG.sub.2 106.sub.2. However, when the MN requests for the VPN service, IPSPG.sub.2 106.sub.2 cannot provide such VPN service, since IPSPG.sub.2 106.sub.2 is not provisioned for customer A. That is, IPSPG.sub.2 106.sub.2 is not logically connected to CPE.sub.A1 122.sub.11 in a secure fashion. Later on, when this MN roams into the region serviced by IPSPG.sub.3 106.sub.3, the data session again is reestablished with IPSPG.sub.3 106.sub.3. When the MN 130.sub.1 requests for the VPN service, IPSPG.sub.3 106.sub.3 is able to provide the VPN session, since IPSPG.sub.3 106.sub.3 is provisioned for customer A.**” [0011]) In another words, the packets for control and management

(request packets) are rejected when the IPSP is not logically connected to CPE in a secure fashion.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 3, 7, 9-10 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Guo et al (US 2004/0168051 A1) in view of O'Neill (US 2005/0207340 A1).

Regarding claims 3 and 7, Guo discloses the method and apparatus for optimally provisioning connectivity for network-based mobile virtual private network (VPN) services. Guo further teaches the data session is reestablished with IPSP.sub.2 160.sub.2. Although Guo does not expressly teaches transferring, by said current radio access point, when a said mobile terminal is to be handed over from a current radio access point to which it is currently connected to a new radio access point, all of said session information that said mobile terminal has set to said new radio access point; and acquiring, by said new radio access point, from said current radio access point, all of said session setting information that said mobile terminal has set. This claimed limitation is inherently included in reestablished with IPSP.

Alternatively, O'Neill, in the same field of endeavor, teaches **"When a mobile node (MN) 14 moves geographically, the radio propagation between it and nearby base stations (BS) 12, 12' varies. As a result of changes in radio communication due to movement, when moving inot the second cell 10' form the first cell 10, the preferred BS changes from 12 to 12'. In order to allow communication through the preferred base station a hand-off will occur from the current base station to the new preferred base station. Thus, when a mobile node moves from the first cell 10 to the second cell 10' a handoff will occur. As a result the mobile node, e.g., node 14 entering the second cell 10' will begin being served by BS 12'. This hand-off causes the resource and session information, sometime called "state" or "state information", known in BS 12 to be transferred to BS 12'."** [0050])

Therefore, it would have been obvious to those having ordinary skill in the art at the time of the invention was made to implement the method for controlling hand-off, such as taught by O'Neill, in Guo et al, when mobile roaming to a new base station.

Regarding claims 9 and 10, Guo further teaches:

transmitting and receiving packet for control and management that art transmitted and received between said radio access points, said mobility management nodes, and said gateways that are arranged within said mobile communication network by way of a control/management virtual network that is provided within said mobile communication network; and

refusing packets for control and management that have been received from a source other than said control/management virtual network (**“when this MN 130.sub.1 roams into the region served by IPSP.sub.2 106.sub.2, the data session is reestablished with IPSP.sub.2 106.sub.2. However, when the MN requests for the VPN service, IPSP.sub.2 106.sub.2 cannot provide such VPN service, since IPSP.sub.2 106.sub.2 is not provisioned for customer A. That is, IPSP.sub.2 106.sub.2 is not logically connected to CPE.sub.A1 122.sub.11 in a secure fashion. Later on, when this MN roams into the region serviced by IPSP.sub.3 106.sub.3, the data session again is reestablished with IPSP.sub.3 106.sub.3. When the MN 130.sub.1 requests for the VPN service, IPSP.sub.3 106.sub.3 is able to provide the VPN session, since IPSP.sub.3 106.sub.3 is provisioned for customer A.” [0011]**) In another words, the packets for control and management (request packets) are rejected when the IPSP is not logically connected to CPE in a secure fashion.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sayers et al (US 6,687,243 B1) discloses method and apparatus for integrated wireless communications in private and public network environments.

Ekberg (US 7,003,282 B1) discloses system and method for authentication in a mobile communications system.

Kimura et al (US 2002/0133595 A1) discloses a system communicating data with a mobile node includes a server and a plurality of networks connected to the server.

Miki et al (US 2002/0176414 A1) discloses an access node run as a packet switching apparatus enables IP connection services for a plurality of access method.

Wang et al (US 5,875,185) discloses an exclusive VCC is maintained between each two communicating work station (MT pair).

Chang et al (US 6,487,406 B1) discloses PCS-to-Mobile IP internet working.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brenda Pham whose telephone number is (571) 272-3135. The examiner can normally be reached on Monday-Friday from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

December 3, 2008

/Brenda Pham/

Primary Examiner, Art Unit 2416